

Bruce C. Denardo

PUBLICATIONS

I. Refereed Publications

32. Bruce Denardo and Gregg L. Miller, "Nonradiating and quasi-nonradiating wave sources in one dimension," submitted to *Am. J. Phys.*, 14 January 2002.
31. Bruce Denardo, "Temperature of a light bulb filament," *Phys. Teach.* **40**, 101-105 (2002).
30. Bruce Denardo, Leonard Pringle, Carl DeGrace, and Michael McGuire, "When do bubbles cause a floating body to sink?" *Am. J. Phys.* **69**, 1064-1072 (2001).
29. Bruce Denardo and Steven R. Baker, "Nonreflecting termination of a mass-and-spring lattice," *Am. J. Phys.* **69**, 382-384 (2001).
28. Bruce Denardo, John Earwood, and Vera Sazonova, "Experiments with electrical resistive networks," *Am. J. Phys.* **67**, 981-986 (1999).
27. John N. Kordomenos, Miguel Bernard, and Bruce Denardo, "Experimental microwave radiometry of a sonoluminescing bubble," *Phys. Rev. E* **59**, 1781-1784 (1999).
26. Bruce Denardo, John Earwood, and Vera Sazonova, "Parametric instability of two coupled nonlinear oscillators," *Am. J. Phys.* **67**, 187-195 (1999).
25. Andrés Larraza and Bruce Denardo, "An acoustic Casimir effect," *Phys. Lett. A* **248**, pp. 151-155 (1998).
24. Bruce Denardo, "A simple explanation of simple nonradiating sources in one dimension – Comment on 'Nonpropagating string excitations,' by M. Berry, J. T. Foley, G. Gbur, and E. Wolf [*Am. J. Phys.* **66** (2) 121-123 (1998)]," *Am. J. Phys.* **66**, 1020-1021 (1998).
23. Bruce Denardo, "Nonanalytic nonlinear oscillations: Christiaan Huygens, quadratic Schrödinger equations, and solitary waves," *J. Acoust. Soc. Am.* **104**, 1289-1300 (1998).

22. Andrés Larraza, Christopher D. Holmes, Robert T. Susbilla, and Bruce Denardo, "The force between two parallel rigid plates due to the radiation pressure of broadband noise: An acoustic Casimir effect," *J. Acoust. Soc. Am.* **103**, 2267-2272 (1998). This was chosen as a "selected research article" in JASA.
21. Bruce Denardo, "Demonstration of the parallel-axis theorem," *Phys. Teach.* **36**, 56-57 (1998).
20. Bruce Denardo, Cecille Pemberton, and Kumar Bhatt, "Raising a circular body over a step," *Phys. Teach.* **35**, 278-281 (1997).
19. Andrés Larraza and Bruce Denardo, "Acoustic waveguides as tools in fundamental nonlinear physics," in Phillip F. Schewe and Ben P. Stein, editors, *Physics News in 1996* (American Institute of Physics, College Park, Maryland, 1997), pp. 2-3.
18. Andrés Larraza and Bruce Denardo, "Acoustic waveguides as tools in fundamental nonlinear physics," *J. Acoust. Soc. Am.* **101**, 27-28 (1997).
17. Andrés Larraza, Bruce Denardo, and Anthony Atchley, "Absorption of sound by noise in one dimension," *J. Acoust. Soc. Am.* **100**, 3554-3560 (1996).
16. Miguel Bernard and Bruce Denardo, "Re-computation of Ando's approximation of the end correction for a radiating semi-infinite circular pipe," *Acustica* **82**, 670-671 (1996).
15. Bruce Denardo and Miguel Bernard, "Design and measurements of variably nonuniform acoustic resonators," *Am. J. Phys.* **64**, 745-751 (1996).
14. Richard Raspet, Bruce Denardo, H. E. Bass, James Brewster, and John Kordomenos, "Investigation of parametric drive of a longitudinal gas-filled resonance tube," *J. Acoust. Soc. Am.* **99**, 725-729 (1996).
13. Bruce Denardo and William B. Wright, "Structural properties of kinks and domain walls in nonlinear oscillatory lattices," *Phys. Rev. E* **52**, 1094-1104 (1995).
12. Richard Masada and Bruce Denardo, "Removing the errors," *Phys. Teach.* **33**, 262 (1995).
11. Bruce Denardo and Steven Alkov, "Acoustic resonators with variable nonuniformity," *Am. J. Phys.* **62**, 315-321 (1994).
10. Bruce Denardo, Andrés Larraza, Seth Putterman, and Paul Roberts, "Nonlinear

theory of localized standing waves," *Phys. Rev. Lett.* **69**, 597-600 (1992).

9. Bruce Denardo, Brian Galvin, Andrés Larraza, Alan Greenfield, Seth Putterman, and William Wright, "Observations of localized structures in nonlinear lattices: Domain walls and kinks," *Phys. Rev. Lett.* **68**, 1730-1733 (1992).

8. Bruce Denardo and Richard Masada, "Rubber hysteresis experiment," *Phys. Teach.* **28**, 489-491 (1990).

7. Bruce Denardo, William Wright, Brad Barber, and Chris Folley, "A rotating U-tube experiment," *Am. J. Phys.* **58**, 631-635 (1990).

6. Bruce Denardo, William Wright, Seth Putterman, and Andrés Larraza, "Observation of a kink soliton on the surface of a liquid," *Phys. Rev. Lett.* **64**, 1518-1521 (1990).

5. Bruce Denardo and Richard Masada, "A not-so-obvious pendulum experiment," *Phys. Teach.* **28**, 51-52 (1990).

4. Bruce Denardo, Brad Barber, Chris Folley, and William Wright, "Nonfrictional hysteresis in a rotating U-tube," *Am. J. Phys.* **57**, 1126-1130 (1989).

3. Bruce Denardo and Andrés Larraza, "A geometrical approach to sums of uniform random variables," *Am. J. Phys.* **57**, 749-755 (1989).

2. Bruce Denardo, Selmer Wong, and Alpha Lo, "Errors due to average velocities," *Am. J. Phys.* **57**, 528-534 (1989).

1. Bruce Denardo and Seth Putterman, "Theory of nonlinear standing waves in a two-dimensional system of charged particles," *Phys. Rev. B* **37**, 3720-3725 (1988).

II. Nonrefereed Publications and Other Writings

46. Bruce Denardo, "When Do Bubbles Cause a Floating Body to Sink?," meeting of Northern California/Nevada section of the American Association of Physics Teachers, Lawrence-Berkeley National Laboratory, Berkeley, California, 30-31 March 2001.

45. Bruce Denardo, "Nonradiating wave sources," meeting of Northern California/Nevada sections of the American Association of Physics Teachers, Stanford University, Stanford, California, 7-8 April 2000.

44. Bruce Denardo, *Acoustics Demonstrations* (Department of Physics, Naval Postgraduate School, 2000).
43. Bruce Denardo, "Experiments with electrical resistive networks," joint meeting of Northern California/Nevada and Southern California sections of the American Association of Physics Teachers, NASA Ames Research Center, Mountain View, California, 9-10 April 1999.
42. Jessica Drewrey, Bruce Denardo, John Earwood, Michael McGuire, James Sabatier, and Kim Whicker, "Standing waves in an electromagnetically driven conducting wire," *J. Acoust. Soc. Am.* **104**, No. 3, Pt. 2, 1793 (1998). [Names of authors were modified after this abstract was printed.]
41. Bruce Denardo and Richard Raspet, *Some Solutions to Goldstein's Second Edition of "Classical Mechanics"* (Department of Physics and Astronomy, University of Mississippi, 1998).
40. Timothy G. Simmons, Bruce Denardo, Andrés Larraza, and Robert Keolian, "Acoustic Radiometer Demonstration," *Proc. of the 16th International Congress on Acoustics and 135th Meeting of Acoustical Society of America*, 20-26 June 1998, Vol. I, edited by Patricia Kuhl and Lawrence Crum, pp. 129-130.
39. Wayne E. Prather, Bruce Denardo, and Richard Raspet, "Parametric Excitation of a Helmholtz Resonator," *Proc. of the 16th International Congress on Acoustics and 135th Meeting of Acoustical Society of America*, 20-26 June 1998, Vol. I, edited by Patricia Kuhl and Lawrence Crum, pp. 149-150.
38. Andrés Larraza, Christopher D. Holmes, Robert T. Susbilla, and Bruce Denardo, "An Acoustic Casimir Effect," *Proc. of the 16th International Congress on Acoustics and 135th Meeting of Acoustical Society of America*, 20-26 June 1998, Vol. I, edited by Patricia Kuhl and Lawrence Crum, pp. 131-132.
37. Timothy G. Simmons, Bruce Denardo, Andrés Larraza, and Robert Keolian, "An acoustic radiometer," *J. Acoust. Soc. Am.* **103**, No. 5, Pt. 2, 2763 (1998).
36. Wayne E. Prather, Bruce Denardo, and Richard Raspet, "Parametric excitation of a Helmholtz resonator," *J. Acoust. Soc. Am.* **103**, No. 5, Pt. 2, 2765 (1998).
35. Andrés Larraza, Christopher D. Holmes, Robert T. Susbilla, and Bruce Denardo, "An acoustic Casimir effect," *J. Acoust. Soc. Am.* **103**, No. 5, Pt. 2, 2763 (1998).
34. John Earwood, Vera Sazonova, and Bruce Denardo, "Demonstrations of Parametric Excitation," meeting of Mississippi Association of Physicists, Jones

County Community College, Ellisville, Mississippi, 28 March 1998.

33. Vera Sazonova, John Earwood, and Bruce Denardo, "Theory and Numerical Simulations of a Newly-Discovered Parametric Instability," meeting of Mississippi Association of Physicists, Jones County Community College, Ellisville, Mississippi, 28 March 1998.

32. Cecille Pemberton, Bruce Denardo, and Kumar Bhatt, "Raising a circular body over a step," American Association of Physics Teachers' *Announcer* **27**, no. 4, p. 113 (1997).

31. Bruce Denardo, "Nonanalytic nonlinear oscillations: Christiaan Huygens, quadratic Schrödinger equations, and solitary waves," *J. Acoust. Soc. Am.* **101**, No. 5, Pt. 2, 3081 (1997).

30. Vivek Mital, Bruce Denardo, Hyeon Jang, and Andrés Larraza, "Numerical simulations of the absorption of sound by noise in one dimension," *J. Acoust. Soc. Am.* **101**, No. 5, Pt. 2, 3080 (1997).

29. Anthony Atchley, Bruce Denardo, Robert Keolian, Andrés Larraza, and James Sabatier, "Acoustics Demonstrations for the Classroom: The Science of Sounds," Program for the 163rd National Meeting of the American Association for the Advancement of Science, 13-18 February 1997, Seattle, Washington, p. S-9.

28. John Kordomenos, Miguel Bernard, and Bruce Denardo, "Experimental microwave radiometry on a sonoluminescence bubble," *J. Acoust. Soc. Am.* **100**, No. 4, Pt. 2, 2717 (1996).

27. Miguel Bernard and Bruce Denardo, "Theory and feasibility of breather solitons in sandstone," *J. Acoust. Soc. Am.* **100**, No. 4, Pt. 2, 2568 (1996).

26. David Carter, Thomas Jamerson, and Bruce Denardo, *Physics 221 Laboratory Manual* (Department of Physics and Astronomy, University of Mississippi, 1996).

25. Bruce Denardo, *Physics Lecture Demonstrations* (Department of Physics and Astronomy, University of Mississippi, 1996).

24. Bruce Denardo and Miguel Bernard, "Design and measurement of variably nonuniform acoustic resonators," *J. Acoust. Soc. Am.* **99**, No. 4, Pt. 2, 2482 (1996).

23. Andrés Larraza and Bruce Denardo, "Absorption of sound by noise in one dimension," *J. Acoust. Soc. Am.* **99**, No. 4, Pt. 2, 2539 (1996).

22. Richard H. Rand, William I. Newman, Bruce C. Denardo, and Alice L. Newman,

"Dynamics of a nonlinear parametrically-excited partial differential equation," *Proceedings of the 1995 Design Engineering Technical Conferences*, vol. 3, Part A, September 17-20, 1995, Boston, Massachusetts, American Society of Mechanical Engineers vol. DE - vol. 84 - 1, pp. 747-758.

21. Bruce Denardo, "Far-Off-Equilibrium Acoustic Phenomena," in *Proceedings of the 1994 Physical Acoustics Summer School*, Asilomar, California, 24 June - 1 July 1994, pp. 306-357.

20. Richard Raspet, Bruce Denardo, James Brewster, and John Kordomenos, "Investigation of parametric drive of a longitudinal gas-filled resonance tube," *J. Acoust. Soc. Am.* **96**, Pt. 2, 3221 (1994).

19. Bruce Denardo, "Acoustic resonators with variable nonuniformity," *J. Acoust. Soc. Am.* **95**, Pt. 2, 2935 (1994).

18. Bruce Denardo, Andrés Larraza, Anthony Atchley, and Steven Dorff, "Absorption of sound by noise in one dimension," *J. Acoust. Soc. Am.* **93**, No. 4, Pt. 2, 2383 (1993).

17. Bruce Denardo and William Wright, "Structural properties of kinks and domain walls in nonlinear vibratory lattices," poster at the 9th Annual University of California Conference on Nonlinear Science, Los Angeles, California, 20-21 February 1993.

16. Bruce Denardo, Andrés Larraza, and Charles McClelland, "Kink-assisted mode hopping in a surface wave resonator," *J. Acoust. Soc. Am.* **91**, Pt. 2, 2330 (1992).

15. Andrés Larraza and Bruce Denardo, "Absorption of sound by noise in one dimension," *J. Acoust. Soc. Am.* **91**, No. 4, Pt. 2, 2330 (1992).

14. R. Keolian, A. Larraza, and B. Denardo, "Dynamics of a gas of random nonlinear waves," 3rd Annual R&D Information Exchange Conference, Naval Surface Warfare Center, Silver Spring, Maryland, April 1992.

13. Bruce Denardo, Brian Galvin, Andrés Larraza, Alan Greenfield, Seth Putterman, and William Wright, "Observations of localized structures in nonlinear vibratory lattices: Domain walls and kinks," poster at the 8th Annual University of California Conference on Nonlinear Science, Irvine, California, 28-29 Feb 92.

12. Bruce Denardo and Andrés Larraza, "On nonlinear equations for fields with a level repulsion spectrum," *Proc. of WASDA IV (Waves and Soliton Days, Antwerp)*, 1991.

11. Bruce Denardo, "Standing solitons," *J. Acoust. Soc. Am. Suppl.* 1, **88**, S41

(1990).

10. Charles McClelland, Bruce Denardo, Andrés Larraza, Alan Greenfield, and Seth Putterman, "Observations of standing solitons in a parametrically driven pendulum lattice," *J. Acoust. Soc. Am. Suppl.* 1, **88**, S75 (1990).

9. Brian Galvin, Bruce Denardo, and Andrés Larazza, "Numerical studies of standing solitons in a nonlinear lattice," *J. Acoust. Soc. Am. Suppl.* 1, **88**, S76 (1990).

8. Andrés Larazza and Bruce Denardo, "Nonlinear evolution equations for fields with a level repulsion spectrum," *J. Acoust. Soc. Am. Suppl.* 1, **88**, S76 (1990).

7. Bruce Denardo, *Observations of Nonpropagating Oscillatory Solitons* (Ph. D. dissertation, Department of Physics, University of California, Los Angeles, California, 1990).

6. Andrés Larraza, Bruce Denardo, and Seth Putterman, "Nonpropagating solitons," Workshop V on Nonlinear Stability, Book of Abstracts, p. 174, D. K. Callebaut (ed.), University of Antwerp, Belgium (1989).

5. Bruce Denardo, Andrés Larraza, and Seth Putterman, "Observation of a topological kink soliton in a highly compliant waveguide," *J. Acoust. Soc. Am. Suppl.* 1, **84**, S34 (1988).

4. Bruce Denardo, Francois Gallet, Seth Putterman, and Albert Migliori, "Attempts to observe wave turbulence," *J. Acoust. Soc. Am. Suppl.* 1, **84**, S35 (1988).

3. Seth Putterman, Bruce Denardo, and Gary Williams, "Nonlinear acoustics of a two-dimensional plasma in He-4," *J. Acoust. Soc. Am. Suppl.* 1 **80**, S45 (1986).

2. Bruce Denardo, *Physics 8A Laboratory Manual* (Department of Physics, University of California, Los Angeles, California, 1987).

1. Bruce Denardo and Richard Masada, *Physics One Laboratory Manual* (Santa Monica College, Santa Monica, California, 1983).